CLAIMS

1. A planer comprising:

a shoe, the shoe defining an aperture;

a body mounted on the shoe; the body including a wall and the wall defining a recess and an expulsion aperture;

a cutting drum rotatably mounted within the recess, the drum having a periphery and a portion of the periphery of the cutting drum projects through the aperture in the shoe;

a motor mounted within the body to rotatingly drive the cutting drum;

a cutting blade mounted on the periphery of the drum and adapted for cutting a work piece when the drum is rotating, the cutting action of the blade causing debris created by the cutting to be ejected from the recess through the expulsion aperture;

an airflow generator for producing an airflow within the body for entraining and removing debris created by the cutting action of the blade;

a conduit defined within the body for directing the airflow, the conduit connected to the recess by the expulsion aperture; and

wherein the debris entering the conduit through the expulsion aperture travels substantially in a first direction, and the airflow through the conduit adjacent to the expulsion aperture travels substantially in a second direction, and the first direction of the debris and the second direction of the airflow intersect at an acute angle.

2. A planer as claimed in claim 1 and wherein the wall defining the expulsion aperture also defines a top to the expulsion aperture, said top located at a height above the shoe, and the planer body further defines a nozzle located within the conduit at substantially the same height as the top of the expulsion aperture, and the conduit divides the airflow into a first part and a second part, the first part of the airflow passes a point below the expulsion aperture before flowing past the aperture, and the second part of the airflow passes through the nozzle and then exits the nozzle substantially in a third direction, and the third direction of nozzle airflow and the first direction of the debris intersect at an acute angle.

3. A planer as claimed in claim 1 and further comprising a deflector for guiding the air flow and entrained debris from within the body to outside of the body, the deflector having an exterior surface and insertable into the planer body for connection to the conduit, and wherein the

conduit directs the airflow over the exterior surface of the deflector prior to directing the airflow to the vicinity of the expulsion aperture.

4. A planer as claimed in claim 3 wherein the deflector partially defines the conduit where the airflow passes over the exterior surface of the entrances.

5. A planer as claimed in claim 3 and wherein the body further defines an exhaust aperture in communication with the conduit, and the deflector is insertable into the aperture to connect with the conduit.

6. A planer as claimed in claim 3, wherein the deflector includes an inner end and an outer end, and the deflector is insertable into the planer body at a downward slope from the outer end to the inner end.

7. A planer as claimed in claim 5 and further comprising a flap movable from a first position where the flap closes the exhaust aperture to a second position where the flap does not close the exhaust aperture.

8. A planer as claimed in claim 7, and wherein the exhaust aperture is a first exhaust aperture and the body defines a second exhaust aperture in communication with the conduit, and in the flap first position the flap closes the first exhaust aperture and in the flap second position the flap does not close the first exhaust aperture, and the flap is further movable to a third position wherein the flap closes the second exhaust aperture.

9. A planer as claimed in claim 8, and wherein when the deflector is not inserted in the body and the flap is in the first position, then the airflow and entrained debris exhaust through the second exhaust aperture.

10. A planer as claimed in claim 7, and wherein the flap is pivotally mounted within the body and is pivotable between the first position and the second position.

11. A planer as claimed in Claim 10, and wherein the axis of pivot extends in a vertical plane through the centre of the width of the body.

12. A planer as claimed in claim10, and wherein the flap extends from the axis of the pivot to the side of the planer.

13. A planer as claimed in claim 7, and wherein the flap is resiliently biased to the first position.

14. A planer as claimed in claim 7 and further comprising a spring, the spring biasing the flap to the first position.